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PCRemote

Project documentation

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Documentation

# Project description

The whole project consists of 3 applications: server written with C++ and Qt Framework that will run on Windows operating system and two clients, one for Android and one for Windows Phone.

Clients connect with the server over the network via TCP (for general data transfer purposes) and UDP (for mouse movement requests, since UDP doesn’t perform any data correction checks, therefore doesn’t generate any delays) and will take the control over the cursor and the keyboard.

# Functional requirements

## Functional requirements for clients

1. It is possible to use mobile device like a touchpad to control cursor and scrolls
2. It is possible to use mobile device to control the keyboard (all keys that can be found on English keyboard)
3. It is possible to add and store data about a new server
4. It is possible to connect to the server
5. It is possible to choose sensitivity of a cursor
6. It is possible to define the time of a long click (how long the control needs to be pressed to call it a long click)
7. It is possible to define sensitivity of a scroll

## Functional requirements for the server

1. Server notifies of each new client connection
2. Server notifies of each client disconnection
3. Server processes all client requests concerning cursor movement or key press
4. Has a tray icon
5. Is able to provide information required to connect to it
6. It is possible to change default port for listening
7. It has an option for closing the application from tray icon menu

# Non-functional requirements

## Non-functional requirements for server

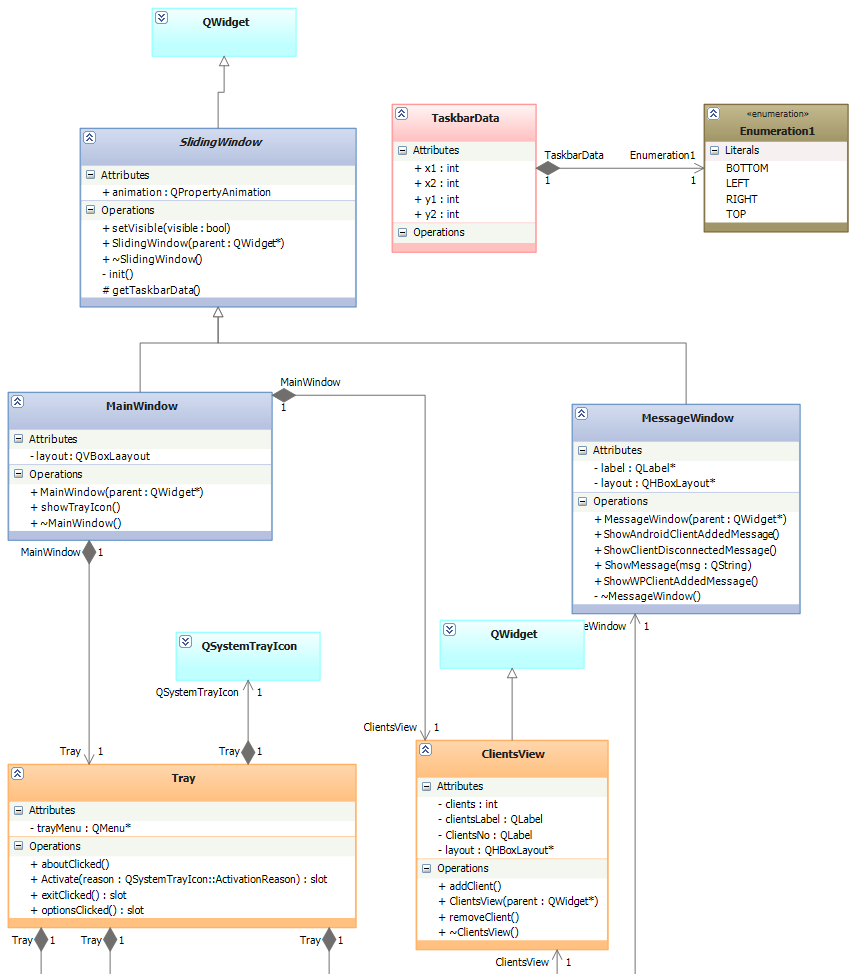
1. Windows Vista / 7 / 8 operating system
2. Wireless internet connection

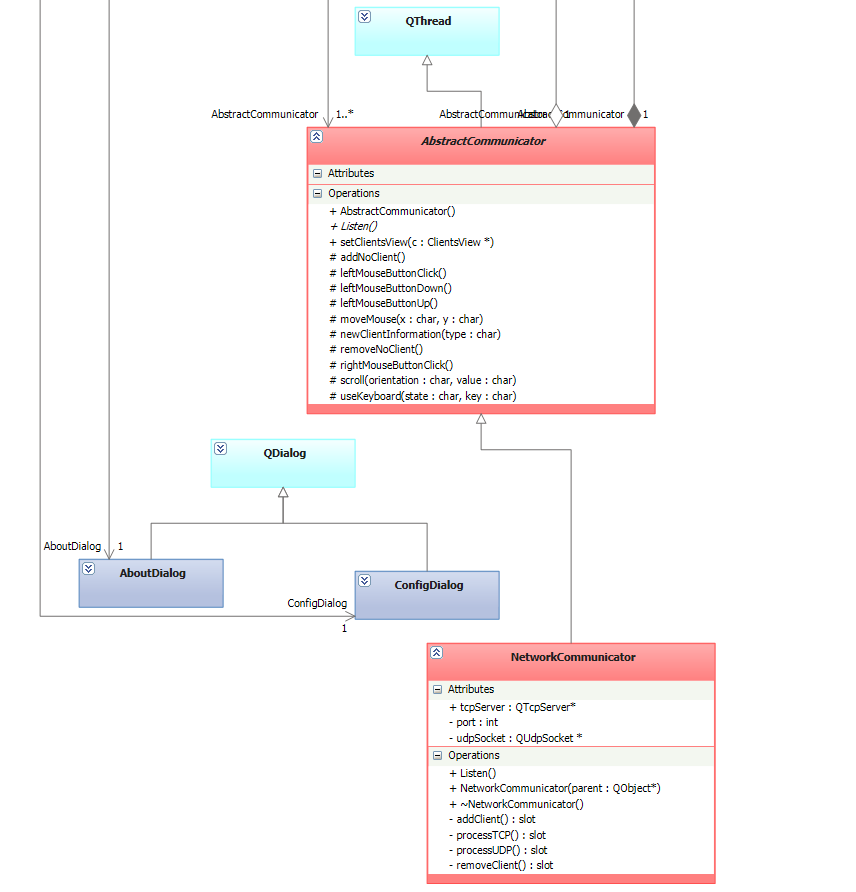
## Non-functional requirements for clients

1. Either Windows Phone 7.1 or Android (at least 2.3 version)
2. Access to wireless internet connection

# Diagrams

## PCRemote Server





Main part of the whole application is Tray class. Even though it’s still just a part of MainWindow, it is visible all the time, while MainWindow is visible only after Tray is activated (tray icon is clicked by a user). Tray contains a set of AbstractCommunicators, although in this example we’ll use only NetworkCommunicator (inherits AbstractCommunicator) that allows to communicate with the clients via TCP (general events) and UDP (mouse movement event).

# Data dictionary

1. Client – any application that is able to communicate with the PCRemote Server
2. Mobile device – device running either Windows Phone (at least 7.1 version) or Android (at least 2.3 version) operating system with client application installed